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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/736,843      | 12/17/2003  | Jin-Gyo Seo          | 1293.1135-C         | 6090             |

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EXAMINER

LAMB, TWYLER MARIE

ART UNIT

PAPER NUMBER

2622

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/736,843 | <b>Applicant(s)</b><br>SEO, JIN-GYO |  |
|                              | <b>Examiner</b><br>Twyler M. Lamb    | <b>Art Unit</b><br>2622             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maegawa et al. (Maegawa) (US 5,745,463) in view of Hagihara et al. (Hagihara) (US 5,249,172).

With regard to claim 1, Maegawa discloses an adaptive writing method of writing input data on an optical recording medium using a write pulse waveform including a first pulse, a last pulse and a multi-pulse train (col 8, lines 20-40), the adaptive writing method comprising: controlling a level of write power of the laser diode in accordance with a size of a present mark to be recorded on the recording medium and a size of at least one of a leading space of the present mark and a trailing space of the present mark to be recorded (col 8, line 41 – col 9, line 7); and writing the present mark on the optical recording medium using the controlled level of write power of the laser diode (col 9, lines 11-32).

Maegawa does not disclose expressly wherein the level of write power increases with increasing size of the present mark to be recorded.

Hagihara discloses a write laser power setting device that includes wherein the level of write power increases with increasing size of the present mark to be recorded (col 4, line 18 – col 5, line 15).

Maegawa & Hagihara are combinable because they are from the same field of endeavor.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Maegawa to include wherein the level of write power increases with increasing size of the present mark to be recorded as taught by Hagihara.

The suggestion/motivation for doing so would have been to increase the write laser power.

Therefore, it would have been obvious to combine Maegawa with Hagihara to obtain the invention as specified in claim 1.

With regard to claim 2, Maegawa discloses wherein the power of the laser diode is varied based on a recording power level controlled by auto laser diode power control (ALPC) (col 8, line 41 – col 9, line 7).

With regard to claim 3, Maegawa discloses wherein the mark size is in a range of 3T to 14T (col 9, lines 48-60).

With regard to claim 4, Maegawa discloses an adaptive recording method for controlling power which a laser diode applies to a recording medium (col 8, lines 20-40), comprising: discriminating a mark size to be recorded on the recording medium from an input signal (col 8, line 41 – col 9, line 7); setting a level of write power of the laser diode in accordance with a magnitude of a present mark of the input data and a

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magnitude of at least one of a leading space of the present mark and a trailing space of the present mark (col 8, line 41 – col 9, line 7); and writing the data on the optical recording medium using the level of write power of the laser diode (col 9, lines 11-32).

Maegawa does not disclose expressly wherein the level of write power increases with increasing size of the present mark to be recorded.

Hagihara discloses a write laser power setting device that includes wherein the level of write power increases with increasing size of the present mark to be recorded (col 4, line 18 – col 5, line 15).

Maegawa & Hagihara are combinable because they are from the same field of endeavor.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Maegawa to include wherein the level of write power increases with increasing size of the present mark to be recorded as taught by Hagihara.

The suggestion/motivation for doing so would have been to increase the write laser power.

Therefore, it would have been obvious to combine Maegawa with Hagihara to obtain the invention as specified in claim 4.

With regard to claim 5, Maegawa discloses wherein the power of the laser diode is varied based on a recording power level controlled by auto laser diode power control (ALPC) (col 8, line 41 – col 9, line 7).

With regard to claim 6, Maegawa discloses an adaptive writing method of writing data on an optical recording medium using a write pulse waveform including a first

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pulse, a last pulse and a multi-pulse train (col 8, lines 20-40), the adaptive writing method comprising: discriminating a mark size of input NRZI (Non Return to Zero Inversion) data (col 8, line 41 – col 9, line 7); and increasing power of overwrite pulses in accordance with a magnitude of a present mark of the input data and a magnitude of at least one of a leading space of the present mark and a trailing space of the present mark (col 8, lines 20-40).

With regard to claim 7, Maegawa discloses an adaptive recording apparatus for controlling power of a laser diode (col 8, lines 20-40), comprising: a discriminator which discriminates at least one of a mark size and a relationship between preceding and following spaces of input data and accordingly sets a power level which increases according to the mark size based on the discriminated mark size (col 8, line 41 – col 9, line 7); a generator which generates an overwrite pulse by controlling a waveform of an overwrite pulse in accordance with the input data; and a laser diode driver which adaptively drives the laser diode in accordance with the mark size by converting a differentiated value between the power level set by the discriminator and a level of a reflected optical signal into a current signal (col 8, lines 20-40).

With regard to claim 8, Maegawa discloses wherein the discriminator further comprises a table in which respective power level data corresponding to mark sizes in a range of 3T to 14T are stored and the discriminator sets power levels for the respective mark sizes by reference to the table (col 9, lines 48-60).

With regard to claim 9, Maegawa discloses wherein the data stored in the table are updated into optimal power level data (col 8, line 41 – col 9, line 7).

With regard to claim 10, Maegawa discloses an adaptive recording method for controlling power which a laser diode applies to a recording medium (col 8, lines 20-40), comprising: discriminating a mark size to be recorded on the recording medium from an input signal (col 8, line 41 – col 9, line 7); initially setting a level of write power of the laser diode in accordance with the discriminated mark size wherein the initially set level of write power increases as the mark size increases in a range of mark sizes of 3T to 14T (col 9, lines 48-60); and adaptively varying the level of write power applied to the laser diode set for each mark or space in response to a power level of a signal reflected from the recording medium during production of the marks (col 8, line 41 – col 9, line 7).

With regard to claim 11, Maegawa discloses wherein the initially set power level increases proportional to the mark size in the range of mark sizes of 3T to 14T (col 9, lines 48-60).

With regard to claim 12, Maegawa discloses wherein the initially set level of the write power for a mark size of 5T is about 10 percent greater than the initially set level of write power for a mark size of 3T (col 9, lines 48-60).

With regard to claim 13, Maegawa discloses wherein the initially set level of the write power for a mark size of 1 IT is about 20 percent greater than the initially set level of write power for a mark size of 3T (col 9, lines 48-60).

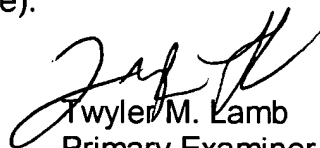
### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Twyler M. Lamb whose telephone number is 571-272-7406. The examiner can normally be reached on Mon, Tues and Thurs 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Twyler M. Lamb  
Primary Examiner  
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